SEPTEMBER, 1901 PRICE 15 CENTS.

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MISS JULIA F. AS BETTY BARKER. By Mary R. Stanbury.

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PHOTO ERA

THE AMERICAN JOURNAL OF PHOTOGRAPHY

VOL. VII. SEPTEMBER, 1901 No. 3

AN AUTUMN LANDSCAPE. By GEO. H. NORRIS.

National Convention of Photographers of America

THE twenty-first annual convention of the Photographers Association of America was held in Detroit, Michigan, on Aug. 6th to 9th inclusive. The President, E. B. Core of New York City, called the convention to order and introduced Mayor Maybury of Detroit who extended a hearty welcome to all, in an eloquent speech. Among other things he said "This gathering is peculiar to the times in which we live. In the years gone by, such a gathering as this would not have been possible — because, in those days, when a man discovered any particular art or advantage in trade or business he kept it a secret. If Daguerre and Talbot were here today, the founders of the two arts which have made this beautiful art what it is, they would be surprised at the absolute freedom with which you are exchanging ideas.

You have elevated your art to such a place that the world cannot get

along without you. The walls of palace and cottage alike seem to say that you are here; the touch of your skilful hand, the inspiration of your intelligence is to make things beautiful. Thus there is a pleasure in life to you, aside from the support which you gain by this beautiful art. You are a comfort to others, and the world is made more beautiful, more tolerable because you are here."

In his thoughtful address as president, Mr. Core endeavored to place before the convention the true aim of the association in the development of this important art of the twentieth century.

"How, then, to develop this aim? There are many points where we as an association can protect each other. The important one is the copyright. A photographer is as much entitled to all the benefits that come from the work of his brain as the inventor or the author. Our present copyright law is rendered inoperative by the condition making it obligatory for the plaintiff to find 'in possession.' Our only hope of having it remedied is in the influence of the members. The photographer needs the copyright, hence the photographer needs the association. The work of no two men will be quite the same. There is individuality in work, just as there is in form and physiognomy, and it is that individuality that tells in the race for life.

"We must seek to draw our inspirations from every source. We shall never be content to search for novel ways of dressing up old ideas to attract attention. We want real art, art which shall endure even while we strive to improve upon it. And if some of you feel the pressure of grim necessity ever upon you of earning cold money out of your toil instead of seeking other apparently speedier ways to fame, let it not dishearten you, but thank fortune that you feel the stern necessity to prove your mettle."

W. I. Scandlin of New York, the accomplished editor of Anthony's Photographic Bulletin, then gave an instructive lecture on the beginning of photography in this country as told in the life of Victor Provost, the first professional photographer in the United States. Mr. Scandlin, by accident, came into the possession of about 100 wax paper negatives made in 1850 and 1851, from which he has made the most beautiful photographs. This induced him to make a study of the man who had left such evidences of remarkable ability in the development of the photographic art in its infancy. This lecture will be reproduced, at length in the next issue of the PHOTO ERA.

Foilowing this, came an address by Pirie MeDonald on the Old Masters, including Raphael, Michael Angelo, Rubens and Van Dyck which was listened to with marked attention.

At the morning session on Wednesday, Frank Hammer, of St. Louis, extended an invitation to the convention of 1903 to come to that city and a committee consisting of Messrs. McDonald of New York; Griffith of Detroit; Rosch of St. Louis; Snyder of Cleveland; Armstrong of Boston; Thompson of Kansas City; Hollinger of New York and Hammer of St. Louis, was appointed to act in the matter.

The annual report of treasurer F. R. Barrows showed total receipts during the year of $5,557.83, expenditures of $2,471.05 and a balance on hand of $3,106.78 for the year. The program of the second day consisted of a talk by W. H. Hollinger of New York, on the gentle art of looking and being pleasant and a characteristic address by Director Griffith of Detroit, on "Pictures that Live." A nominating committee consisting of Messrs. Armstrong of Boston; Hayes of De-

PORTRAIT OF A LADY. By H. A. COLLINGS.

troit; Potter of Indiana; Moore of Atlanta and Snyder of Columbus, was appointed.

In the afternoon, President Core called special attention to the exhibition of the Lens and Brush club of Boston, extending a general invitation to view same and Lucius W. Hitchcock of Buffalo, addressed the convention on the Elements of Composition, a synopsis of which is given elsewhere in this issue.

The principal business of the third day was the election of officers and the selection of a meeting place for 1902.

The committee reported for President, Geo. F. Edmondson, Cleveland, Ohio; 1st Vice President, H. S. Klein, Milwaukee, Wis.; 2d Vice Pres., W. H. Armstrong, Boston; Secretary, C. R. Reeves, Anderson, Ind.

The election resulted in the choice of Geo. F. Edmondson, President; J. Geo. Nussbaumer, Buffalo, 1st Vice President; Henry S. Klein, 2d Vice President and C. R. Reeves, Ind., Secretary. Mr. Armstrong generously declining the nomination in favor of Mr. Klein.

In the discussion which followed, the choice of a convention city for next year, two cities were placed in nomination, Buffalo and San Francisco. The advocacy of San Francisco was ably championed by Carl E. Ackerman of that city, Managing Editor of Camera Craft. The choice of the convention, however, was overwhelmingly in favor of Buffalo, and it was so voted. Dundas Todd of Chicago then addressed the convention on the subject, "My experience in twelve Studios" in which he sought to show that the operator and not the camera was responsible for the picture.

Later Milton B. Punnett of Lewiston, Me., handed in an admirable address on "Practical Chemistry for Professional Photographers" which we will publish in a later issue.

A pleasant feature of the closing session was the presentation of a handsome bronze clock to the retiring president, E. B. Core, the presentation speech being a very brief one, by R. P. Bellsmith of Cincinnati, who expressed a wish that every time Mr. Core looked at the clock it would remind him of the good time he had in Detroit.

Mr. Core said this was a time when he was unable to say anything, only to thank his friends for their gift. Papa Cramer stepped on the platform and said he hoped that the time would never come when Mr. Core could look at the clock without saying, "I am so happy."

Somebody called for three cheers for Papa Cramer, which were given with a hearty will, and the veteran made a humerous response in his delightful German dialect. A poem, written by someone in the hall, was handed up on the platform to be read, and it brought down the house. It was read by the genial editor of the Chicago Photo Beacon:

I am so happy in darkness or light,
I am so happy when wrong or when right,
I am so happy, up hill or down,
I am so happy in country or town;
I am so happy, on land or on sea,
I am so happy wherever I be,
I am so happy when here or when there,
I am so happy when it's cloudy or fair;
I am so happy when good or when bad,
I am so happy when others are sad;
I am so happy in smiles or in tears,
I've been so happy for 85 years;
I am so happy, this is my song,
I am so happy all my life long.
And if in the future I happen to die,
And roost with the angels up in the sky,
I'll telephone down to Hades to you,
I am so happy, and hope you are, too.

A committee on resolutions reported a resolution thanking the mayor, the press and the people of Detroit for the many courtesies the association had received. A rising vote of thanks was tendered the local committee for the excellent work it had done.

EAST RIVER BY MOONLIGHT. By R. McCorkle

The Elements of Composition.

LUCIUS W. HITCHOCK

IF a picture is beautiful it must be good in one or all of three things; color, composition and drawing. As for color, your work thus far is limited to monotones. As for drawing, the camera is the greatest draughtsman in the world. So in pictorial photography your problem is largely a matter of composition or arrangement.

I shall endeavor in this paper to give you the principles that govern composition and the reasons for them, when there are any. In the broad field of art, one can only give theories on which to work; for the essence of art is originality, not a thing to be labeled with any one's rubber stamp. If there is one thing that art abhors more than another, it is dogma; so that, in what I shall have to say, consider it rather as a principle along which you may struggle toward the light, than a set of rules or recipes by which to make a picture. Let me be frank in the start. If you do not feel the thing, and do not have it in you, your progress will be doubtful, for art is not so cold a thing that it can be handed around like a recipe for doughnuts. It can come only from the soul, whether the instrument of its expression be a camera or brush.

Composition is the art of arranging the objects to be depicted so that the eye shall be gracefully led into the picture and centered upon the important thing; or it is a combination of spaces, so varied with light and dark, as to make a decorative whole. Variation, you must know, is the key note of good composition.

The skillful variation of space,

light and color, or light and dark, covers the entire field. This scheme of variation is born in nature itself. It governs every beautiful thing in the world, and has its culmination in the human figure. For instance, take the arm. The upper arm is heavy and stout ; the forearm is longer and more slender ; the hand is of another form, with fingers of varied lengths, each finger with three joints of a different length, tapering to the end. The vegetable kingdom is constructed on the same plan, — a tree, with its limbs of varied length and thickness, tapering to the leaves, whose veinings repeat the construction of the whole.

I wish to make this principle of variation and its relation to Art as clear as possible, so I shall start from first principles, the variation of flat spaces as applied to decorative design.

Arthur Dow in his little book on "Elementary Composition" makes an attempt to show that the essential quality of any composition is its decorative value, making the realistic representation of secondary importance. He redraws several masterpieces in their big masses of light and dark, omitting all detail, to prove his statement. In other words, he claims a picture should be beautiful, from the mere arrangement of light and dark within a given space, regardless of what it represents and he carries the same principles that govern flat decorative design into picture composition itself, and his examples of the principles of space variation are so vivid and clear that I shall give you in a rough way some of them.

Mr. Dow commences with the idea that pictorial art is a space art. First of all, the filling of a flat space ; in putting anything into it, the variation of spaces should be the first consideration of composition, whether it is a design or a picture.

If we place an object in the center, we have no variation at all, as all the spaces between it and its borders are equal. He will take, for instance, a simple square, and show how much more beautiful it is when broken up into varied spaces than when like spaces are used. The square, to begin with, is not as attractive a space to put a picture into, because its sides are not varied, hence monotonous.

Fancy the square broken up into equal spaces, like a checker-board, with but the ordinary variation of dark and light, and we can scarcely conceive a more monotonous figure. It has no beauty or artistic value whatever. Now, on the other hand, let us take the same square and break it into varied spaces, still using straight lines, and still going directly from one side to the other. At once art appears, and we have something interesting. In both cases the design was limited to the square and straight lines in two directions.

Now carry the variations still further and use varied lengths and widths of lines, and your combinations are more beautiful. Add to this oblique and curved lines, with color, and we have all the elements that go to make a beautiful Persian rug.

The rectangle with its unequal sides, one being longer than the other, will for that reason lend itself more readily to a greater and more pleasing variety of spaces. Consequently it is a more interesting shape for a a picture or a design. These same principles can be observed in a beautiful tower, a fine old sideboard, or the facade of a building. This may seem a little remote from the subject of composition, but I shall endeavor to show you how these very rules are directly applicable to the composition of a picture.

It very often happens that the principal masses of your picture are rectangular in form. If you have a

WASHING THE OLD CHINA. By Miss Sarah J. Eddy.

subject that takes in a doorway, buildings, tables, chairs, etc., the placing of these rectangles, one within the other, will play a large part in the composition of your picture; and they should be so placed in relation to one another and to the picture boundary as to give the most pleasing variation of space.

It is often true that the same subject may be photographed in several different ways, all of them good, by simply playing upon different combinations of spaces.

A certain judgment, however, must be used in preserving balance as well as in getting variety. If the principle of variation is carried beyond reason, to extremes, the sense of balance and proportion is destroyed. These are things you must feel in order to do successfully. No one can teach you.

I want to warn you against making an infallible rule for this scheme of arrangement. You will discover that art is far worse than English grammar. You no sooner get a rule than

you are told there are many exceptions to it. For instance, you have been told to get the greatest possible variety in your spaces; but there is another kind of composition, of a more conventional type, in which the repetition of a form or space gives dignity and effect. Numbers are dignified and effective when they are not monotonous. But even conventional composition is simply another form of variation. Like figures side by side, or like figures or forms on either side of a common center, though in themselves monotonous, give variety and contrast to the individual figures or forms that are in the same composition.

Nearly all the large mural decorations of Puis de Chauvannes are constructed on this scheme, and lend themselves well to architectural surroundings.

Up to this point I have talked about the variation of space only, important as far as it goes, but only one-third of the problem of composition.

I now wish to speak of the variation of the line, of its peculiar kind of beauty and why it is so. Take a straight line. It certainly is not artistic. Nature knows that, for she will have none of them. Take varied combinations of a straight line. These are more beautiful, and are capable of good geometrical design.

Now let us take the arc or circle. As a line it is still more beautiful, but it has no variations, and is monotonous, like the other.

Now, take the variations of the curve, and you have the most beautiful single line one can draw, the compound curve, or S line. It is this S line that plays such an important part in composition. Not that we see the line actually drawn in the picture, but we feel the sweep and grace of it running through the entire arrangement.

I don't like to be dogmatic, especially about that which applies to art, but in a perfect composition, the point of view should be presumably from the centre of the picture, in front; and the eye should be drawn into the picture, describing a graceful S line as it goes from one point of interest to another, until it ends in the distance.

This S line is the main-spring of good composition. You will observe its softening influence over angles in nature. She artfully rounds them over and softens them by adjacent lines, and you will do well to take a lesson from the human figure, as it combines all the essentials in the beautiful variation of line as well as mass and color. So in passing let us look at it.

The ugly and repulsive angles of the skeleton are softened and made beautiful by the soft, flowing compound curved lines of the muscles that cover them.

We have discovered that the curve is more beautiful than the angle, but the curve often needs the abrupt strength of the angle, to show off its more subtle charm. However, the curve must be the important line, and you can always manipulate your lights and darks with your accessories so as to soften any angular abruptness.

Sometimes an angle is so obtrusive that it is expedient to cover it up entirely; but straight lines and angles give a certain strength and make a good contrast to the S line, as well as a variation of it. In fact, you must constantly keep the thought of variation before you. One quality will beautify another, while if like qualities are used we have monotony. It is like a voice with too much tremolo, which, when used all the time, ceases to be effective, even giving a sense of weakness, but which, when properly varied with clear even tones, is very telling.

We have considered the variation of space and line. We will now consider the variation of color and light

and dark, the manipulation of which has more to do with the poetry and feeling of a picture than any of the other elements of composition.

I shall speak of color, as the term is used by illustrators, meaning richness in black and white. The two extremes of your palette are black and white, something you must appreciate from the beginning and use discriminatingly. They are your last trumps. Don't play them too quickly. If you are very lavish of one or the other, or both, all over the picture, you have nothing left for the accent, or the effective touch. Be willing to sacrifice certain things for the beautifying of something else. Now, black and white are naturally most effective together, and if you will carefully keep both of these extremes, that is, pure black and pure white, out of the bulk of the picture, saving them for the important place, where you can bring them into strong, sharp contrast together, you will discover how effective they are. Too much black in a picture takes the atmosphere out of it. Pure black is local color and is not transparent. If you can photograph the air between your lens and what is a dead black background in Nature, it will not come out quite black in the picture, and consequently will not take the force out of whatever black accents you may have in the middle distance.

This abuse of black and white is a common defect in the ordinary photograph, due, no doubt, to the inability of the camera to render accurately color values.

By the variation of your lights and darks you can do almost anything you wish. You can place the interest where you please, soften some lines, bring out others, and aid the ordinary lines of perspective in making the picture's depth more effective.

I should like to speak of depth as a quality, not apart from spacing, line and color, but rather as a very beautiful result to be had by the skillful use of them all.

Another way of getting depth is to contract the planes of your picture with light and dark. A shadow thrown over the foreground will concentrate the interest more definitely on the principal object under full light in the middle distance. Often the principal group, treated in dark silhouette with light in the plane beyond, will increase the depth of the picture. Cloud shadows will often make very pleasing combinations this way, giving a sense of greater depth as one line of distance is silhouetted in light or dark against the plane beyond. Placing several planes of perspective with different vanishing points, one behind the other, is also an effective way of getting a beautiful sweep and a sense of great depth, but in doing this great care should be used in keeping the interest in the picture, and not allowing the lines of the first plane to run abruptly out of the picture. It can be avoided by skilfully using your accessories, or parts of the picture itself, to turn the line back into the picture.

I should say, right here, of your picture the same thing that William Morris says about your home, "Have nothing in it that is not either useful, or that you believe to be beautiful." The accessories of a composition have no business there unless they fill a space, carry out a line or help tell the story. Don't put things around unless they have a definite purpose. Don't put everything you have in the studio in the picture. Nothing is more stupid than that. Everything in the picture should be for some purpose of composition, and anything in excess of this only distracts the attention from the principal point of interest. Professor Loefts of Munich said, when something was wrong with his picture and he couldn't make up his mind what it was, that he took something out on general

principles — a safe rule for any one to follow.

In figure compositions you must utilize the beautiful lines of the figure itself, so arrange one figure with another as to carry out the graceful line of each, and the articles of apparel and details must be so arranged as to complete and beautify these lines. The smallest thing is often enough to give direction to a line and carry out a beautiful sweep, even to the falling of a bit of lace and the arrangement of the hair. If you will study the compositions of Gerome, Aimee Morot and Meissonier, you will discover this to be true.

Compositions, like fortunes are made by looking after the little things as well as the big, but this does not mean that you must see all the detail you can. As a rule the camera sees too much, and you must arrange your subject and manipulate your lights so as to overcome this. If one plane of your picture has a great deal of detail in it, be sure the plane it reliefs against is simple. The eye must have a place to rest as well as to feast. As Hunt said "Don't blister your picture all over with facts." Try to make your pictures more suggestive and less literal. I have seen photographers purposely make negatives a little out of focus to accomplish this, but I have never seen an interesting result from this sort of treatment. Things are then monotonously vague, which is monotony just the same, and no improvement over a photograph that is too hard.

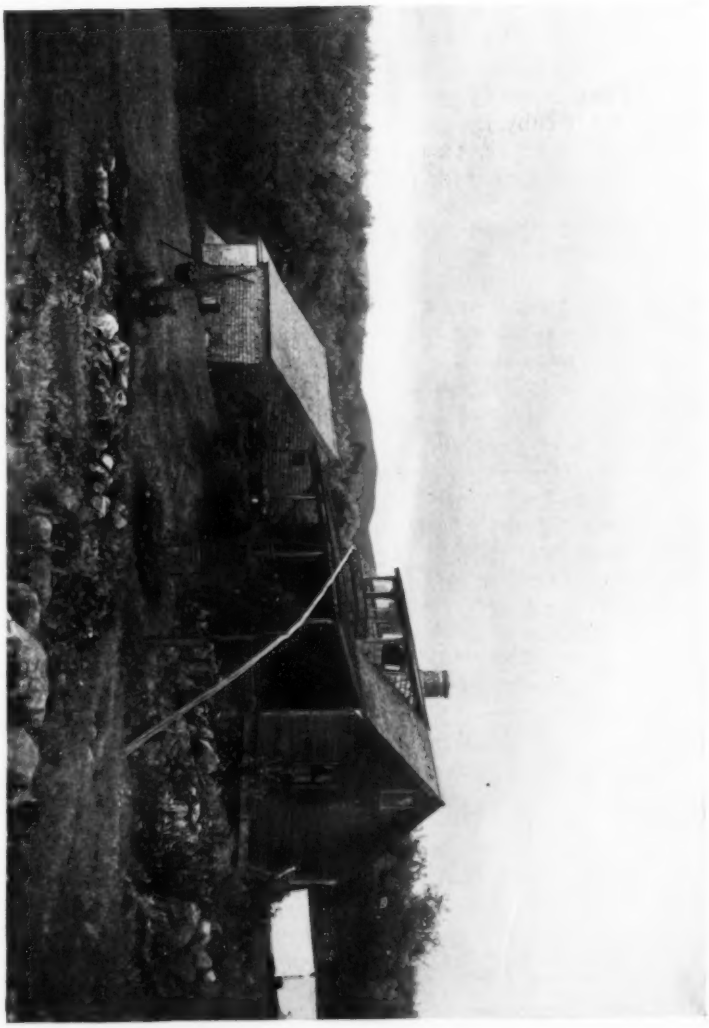
I should like to say a word about the general tone and feeling in pictures. You have heard it said that a picture should stand in and be enveloped in the atmosphere. Make a point of always photographing the air, as well as the subject. The intense realism of a photograph is its only vulgarity. As I said before, make it more suggestive and less literal. Remember that art is something more than mere copying of what we see in front of us. Realism itself is vulgar, and belongs to the same class of art that one finds in Mrs. Jarley's Wax Works, or the ambitious framer who defaces a beautiful picture of a lion's head by placing real bars into the frame, to represent the cage, with a padlock on the outside.

If you can sacrifice by the use of your screens what the painter purposely ignores, the artistic qualities of your photograph will be greatly improved. The trouble is, the camera sees too much, and sees everything equally well. The artist with the camera stays its seeing powers for the unimportant details, and by this sacrifice makes the important things tell the more.

As Hunt said, "All notes in music are not high. There must be low tones as well. But in only such details as as will help the masses. Don't have your work all trills."

Before I stop I want to give a little hint as between artists. Get your impressions from nature and don't try to manufacture them in cold blood. Art is largely a matter of seeing. It is the same old story of a young student starting out with his sketching outfit and walking four miles to find something to paint, and the master doing beautiful things in his back yard. Not that everything is beautiful and worth painting, for it isn't, but there are lots of beautiful things that you will pass every day because you have not the eyes to see them.

Keep on the alert for beautiful combinations and arrangements all the time. You are just as apt to see them in the street car as anywhere else, and if you store up a reserve of souvenirs of this sort you will do more original and better pictures. It is far better than copying what another fellow sees and does before you.



A SUMMER HOME IN NEW HAMPSHIRE. By A. C. Smith.

The Photo Era Art Classes

Elementary Course in School Photography.

CLASS A. LESSON I.

General Suggestions for Class-work with the "School" Camera.

THE PHOTO ERA outfit for school photography should consist of the following articles. The "School" camera; Roll of film; One developing powder; One package of hypo; Two trays; One sheet ruby fabric 3 x 3; One sheet orange paper, 3 x 3; One printing back or frame with glass; One package of blue print paper, or sepia paper with hypo.

Geography. — The class to be supplied with a camera each containing six exposures. A trip to be made under the direction of the teacher during the noon hour, if possible, as light is then best. The character of work to be done will necessarily depend on the character of the country and the recent lessons. Endeavor should be made to have the children discover natural objects which they have had defined in previous lessons, and the teacher should decide when pictures are to be taken. Try to have the children discover whatever you want. Point out only as a last resort. Use leading questions if necessary. Almost any brook will furnish all the details of rivers. The smallness of the scale will be of no consequence in the pictures, if they are taken near the object.

The pictures, if possible are to be developed by the teacher before the class. This may be done in the schoolroom after dark. Then printing frames and blue print paper should be furnished, and the children allowed to print their own pictures, which are afterward to be incorporated in whatever written work is considered desirable.

Nature Study. — The possibilities in this line are numerous, depending on the nature of the work done and the location of the school. As an illustration of what may be done in a city school, we may cite the study of trees. Photographs may be taken of shade trees with and without their leaves, to illustrate the habit, of trees in bloom and in fruit; of branches with the leaves, the flowers, or the fruit; of the ends and sides of timbers, to show the annual rings and the grain of the wood; of constructions of wood, to show the uses. In the suburban and country schools, flowers, stones, animals and numerous other objects may be found which are suitable to be photographed.

English. — For general composition work, the camera will be found a great aid in story-telling. Take the children on a walk, and let them take pictures of whatever interests them. Then let them write the story of the walk and illustrate it with the pictures. Let them picture and describe the operations of daily life in town and country, ploughing, haying, cultivating, cutting ice, shoeing horses, sawing lumber, cutting stone, building houses, etc.

Civics — As studies in civics let them photograph and describe the duties of the mail carrier, the policeman, the street sweeper, the fireman. As studies in transportation and commerce let them take the wagon, the street car, the train, the steamer, the schooner, the crowded wharf. Let them take pictures of whatever interests them, their comrades, their sports and the compositions they write around these will be no drudgery. In future years, they will bless you for the lasting memorial they have of their school days, the happiest days of their lives. (Copyrighted.)

The Athlete, the Camera and the Newspaper.

JULIAN BURROUGHS

Illustrations by the Author

HARVARD 1900 CREW 6.30 P. M. 1-350 sec. Cramer Inst. Plate good lighting, figures small for best work.

THERE is to-day such a growing demand for news-prints and so many amateurs are trying to meet this demand that a few words about the requirements may not be amiss. The only excuse for writing this is the fact that no one knows just what is wanted and I have only been able to find out something about it from a long and varied experience.

Editors are looking for the sensational and the weird; rest assured, that if your picture has that, has "news" value, be it ever so small or dull it will be used. It is only in departments where there is no special demand or pressing need, as in athletics, and also where the prick of competition is sharp that skill and care is necessary. Let us suppose you receive an order from the Boston

HARVARD 1900 CREW, bow men, 1-200 sec. F. 8 New York Plate. Useless for newspapers only part of crew shown.

Herald, or some other paper for a picture of Jim Lawrence in his rowing clothes, to be delivered that night. It is three o'clock, dark, dull clouds are rising in the west, threatening to cut off the light. You hurry to the boat-house, the clouds rise, the oarsmen are slow in getting down; while you try to smother your impatience the clouds cover the sun until your shadow disappears. At last "Jim" comes out pulling his sweater over his handsome head. In reply to your request for his picture he makes excuses, he does not say outright that he will not let you take it, he is too much of a gentleman for that, but his excuses are just as effective — "Some other day" — "this suit is positively indecent," etc., etc., he hitches embarrassed and makes off to attend to some imaginary business. A nice reputation you will have if you fail to get this coy oarsman's picture. Well you wind up your focal-plane shutter, for this is the only one that can be used for speed work in feeble light, measure the strength of the sun with your eye and set the indicator for all the light will "stand". The sun is behind a cloud and a fiftieth of a second is fast enough for f-6.3. If f-8, double the time, if you are using a Planar at f-4, halve it. Your camera loaded you "lay" for your man. Now for this kind of work, i. e. taking the pictures of people who are unwilling to pose for you and who avoid the camera if they can, you must discard the tripod and the twin-lens or "reflex" camera. If you look into the tent-like top of a twin-lens camera to focus and at the same time point it at a man he will instantly turn his back and double up in his efforts to get away. Replace this tell-tale and bulky apparatus by a large, brilliant view-finder and use a lens of great depth of focus. When a man standing covers the view-finder give him eight or nine feet on the focussing scale, if he is a dwarf or a giant, give him more or less accordingly. In general a little experience will enable the photographer to judge distances by watching the size of men on the finder. If possible hold the camera waist high.

CAPT. BULLARD–HARVARD 1901.

At last Jim Lawrence comes out

with the crew, little suspecting what he is coming to as you take your bulb in hand. Station yourself so that that there will be a sharp cross light on his face; if the sun shines get to one side so that there is a right angle between it, the man and the camera. Remember that in reproduction, high-lights and shadows must be strong; fine or delicate gradations of light, so beautiful in the photograph, are lost on the printer's plate. Cut out the atmosphere, get one part of the face in shadow so that the features come out in strong lines and contrasts. In strong light be careful not to over-expose. Get the face against the sky if possible, sacrifice everything else for a three-quarter light on the face. If the sun is high and gives shadows around the eyes, nose and mouth, so much the better. Be careful when Lawrence comes along, not to look at him, gaze at the sky and conclude there is not light enough, size up the crew in general or take an interest in a passing boat. It is better to hold the camera in one hand, putting the bulb under the thumb and pressing it against the camera box; use the other hand to hold on your hat or run it in your pocket. Stand sidewise, turned away from unsuspecting Jim, but watching him in the finder until he turns as you want him when the soft, reassuring "buzz" of the shutter makes you turn happily away to put in a new plate. By such means I was able to get the entire Harvard crew without putting these coy youths to the pain of refusing to pose for me.

HARVARD HURDLERS—1901. 1-200 sec. New York Plate.

Now for development. The metol-hydrochinon is very satisfactory because it works so fast and can be so easily regulated. Remember that the metol and the sulphite give the softness and the detail which the hydrochinon intensifies. Use plenty of the latter and if your negatives are blue and weak, you have got too much sulphite; correct this by adding more carbonate for it is the carbonate that gives printing qualities. Often a few drops of hypo help give tone and clearness to the negatives. If you have detail on the ground but the negative is weak with a thin sky the exposure is all right and the development all wrong. Use fresh, strong developer and put in the carbonate until the skies are dense. You must have sharp, strong negatives and these must be printed on Solio

paper when possible, otherwise glossy Velox or Cyko. At night of course only a gaslight paper can be used. It is not my purpose to praise Solio or Royal but they are the only papers for newspaper prints, they hold the detail in both high lights and shadows and adapt themselves to any negative be it thin or dense, flat or contrasty.

Where the victim is willing to pose for his picture the photographer's task is simple; the real pleasure is in taking bashful people who will not pose. In such cases the method described above should attain the desired end for there is still a very great ignorance of hand camera photography adrift in the community.

SHUBRICK—1-50 sec. In Shadow. New York Plate.

Tree-Top Photography

ERNEST HAROLD BAYNES

THE amateur photographer who yearns for something more exciting than taking pictures of houses and landscapes, will find a convenient outlet for his feelings in tree-top photography. Of course there are plenty of other exciting branches of the art — sub-marine and wild animal photography for examples — but most of them require special and expensive apparatus, and take up more time than most of us can afford to give to a single amusement. Tree-top photography on the other hand requires practically no special apparatus, and as trees are accessible to most of us every day in the week, little time need be lost in hunting for subjects. Moreover, this hobby is one which may be ridden at all seasons of the year. In the spring there are the nests of hawks, owls and crows to be photographed, and through the summer the nests of other birds with their eggs and young. In the autumn there are the homes of gray squirrels, red squirrels and flying squirrels, and the nests of the paper-making hornets, and in the winter, when the leaves have fallen, unusual and interesting pictures may often be made of whatever is going on upon the ground below. Bird's-eye views of woodmen, for example, at work with their axes, saws and mallets, and with their horses or ox-carts standing close by, enable one to get an idea of the world as it appears to an animal which spends most of its time in the trees. Then there are often strange and interesting effects to be observed from the upper branches of tall trees, which are never seen from the ground. Sometimes there is a sea of foliage extending to the horizon; its billows in endless shades of green, rising

THE START. By J. R. BAYNES.

L. of C.

and falling in the wind like those of the ocean. From instantaneous photographs of these swirling wind-blown tree-tops, what studies could be made for the painting of a storm. These are but hints; individual tastes and experiences will suggest scores of other uses and applications of tree-top photography.

For this kind of work no special make of camera is needed; any instrument suitable for making out-of-door pictures will answer, though in some cases a telephoto attachment will be an advantage, The operator will have no use for a tripod, but he should have instead, a jointed metal arm, one end of which may be screwed into a tree at any point. A camera, fastened to the other end of such a contrivance, may, by means of the joints, be pointed in any direction.

A hand mirror will be found useful for many purposes. For instance, the operator may wish to know, before making a difficult ascent to photograph a bird's nest, whether there are eggs in it or not. With a tilting mirror at the end of a fishing-rod he can often see the interior of a nest without going up the tree, and thus save himself many a fruitless climb. If he has a companion with a field-glass, so much the better, for while one man handles the mirror, the other can give his attention to the reflections. Then it often happens that in photographing a natural object a little more light is required on some particular part, the inside of a bird's nest for example. With the mirror the light can be applied precisely where it is needed. A stout jack-knife or a small saw which may be carried at the belt, will be found convenient for removing branches which obstruct the view, but in the case of bird-nest photography this pruning should be done with great consideration, or the birds' chances of rearing their families will be materially lessened.

ALMOST THERE. By John R. Baynes.

PHOTOGRAPHING NEST OF RED SHOULDERED HAWK. By J. R. Baynes.

Concerning plates, any of the high-grade makes will give excellent results. While fast plates are absolutely necessary for instantaneous work, slow ones may be used for everything but moving objects, and slow plates certainly have some great advantages for the beginner. They are not so sensitive, allow of much greater latitude in the exposure and are not so easily spoiled during development. Moreover they are much less subject to blisters and frills in hot weather. Many of the accompanying pictures were taken on Carbutt's "B" plates, which with a medium fast lens and an ordinary camera require about two seconds in full sunlight. It is exceedingly difficult to give any rule for exposures except in particular cases where all the conditions are known. Mr. Francis H. Herrick, in his interesting article "A New Method of Bird Photography," in the July number of Photo Era, gives useful particulars concerning the photographing of birds and their nests, with examples of his work done under given conditions. A glance at this article may help the prospective tree-top photographer to a certain extent, but a little practice with his own particular instrument will be of more use than any rule he may learn by heart.

There are certain risks which must be taken in this branch of photography, and the operator will find enough of these to add zest to the sport without being fool-hardy. The man who persists in being careless, in the tops of tall trees, is very apt to have a funeral in his family at an early date. At times it is necessary, in order to obtain a picture or a series of pictures, to remain in a tree-top for an hour or more at a time; in such cases the wisest thing a man can do is to secure himself with a rope. Personally when I have a long operation of this kind on hand, the first thing I do after making the ascent is to tie a

rope under my arms and then pass it around a convenient branch. The rope gives a feeling of security which is a great advantage in itself, as it permits a man to give undivided attention to the photographic end; incidentally it may some day save his life. No matter how skilful a climber may be, there comes a day when his foot slips on the wet bark, or when a treacherous branch breaks off short like the stem of a clay pipe, and then if he has been careful he will not be dead.

There are many ways of getting up trees, and almost everyone who does much climbing has his own ideas as to which way is the best. The linemen naturally think that spurs, such as they use to ascend telegraph poles, offer the proper solution to the problem and there is no doubt that for tall, straight trees which have few branches, spurs are a great assistance, but in working amongst branches, they are, to my mind a great handicap. If a man has strong arms and legs and knows how to "shin" well, he is equipped for ascending most of the trees he will ever have need to climb. Moreover, muscles are more reliable than spurs; if they are going to "give out" they usually give warning of the fact, and do not let a man down all at once like a piece of faulty steel.

It is best to leave the camera on the ground until the ascent has been made, and then haul it up by means of a cord. By this plan the operator not only avoids unnecessary chances of accident to his instrument but gives himself a chance to cope with his scansorial problems unincumbered.

BIRD'S EYE VIEW OF THE NEST. By E. H. Baynes.

WAITING FOR PAPA. By Sarah J. Holme.

Electrical Action of Slides

EDWARD S. KING

Fig. 1.

AN account of an experience which I have recently had in tracing a photographic difficulty to an electrical origin, may be of interest and value to the readers of the PHOTO ERA. The number of plates used at Cambridge in the photographic work of the Harvard Observatory, is very large. For the year ending September 30, 1900, about 6000 plates were used, of which over 5000 were exposed to the sky in the telescopes or cameras. It must be remembered that these figures do not include the plates taken at the Arequipa station, where the number would be equally great. Among so many plates, various defects are occasionally found, which cause much annoyance. These defects may consist of translucent spots in the film, or they may appear as dark blotches, points or lines. They obscure or affect the intensity of the stellar images for those parts of the plate where they occur, or they have

Fig. 2.

so much the appearance of comets or other celestial objects, as to require special study in each particular case. Therefore, it is important to determine whether such new appearances have a celestial or a terrestial origin; and, if the latter, to change the kind of plate or the manner of its manipulation.

The objects that gave the difficulty

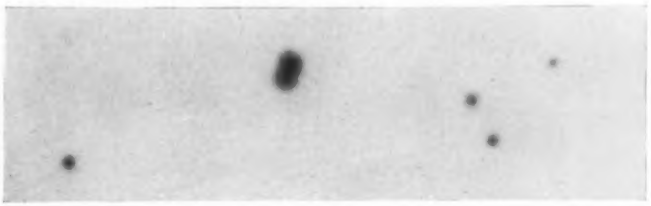


Fig. 3.

now to be considered, were first noticed appearing in shoals of dark, hazy spots, as seen in the upper part of Figure 1. Among these spots, or near them, would be found others with centres more or less well defined. Specimens of these spots may be seen in Figure 2. These, and the following figures are negatives, or, in other words, they look just like the

It was not until I had observed the thornlike structure at the edge of a plate, as seen in Fig. 1, that I connected these appearances with electrical action. It immediately occurred to me that the cause lay in the hard rubber slides, which we were now using in the plate holders instead of the old pasteboard ones. It had been noticed, that when the plate holders were brought into the dark-room on a cold night, a train of sparks would frequently follow the slides as they were drawn rapidly in changing the plates. Fig. 2 shows considerable structure at the edge of the plate, where the sparks were usually seen. For a definite test, a slide previously electrified by rubbing with a woolen cloth, was laid down on the film of a

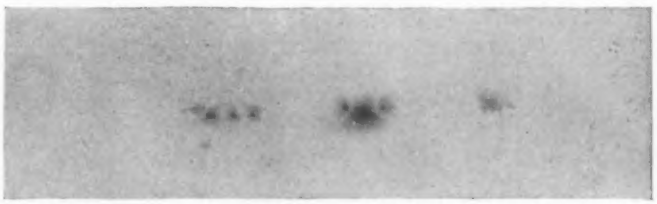


Fig. 4.

corresponding portions of the plates originally exposed in the various instruments. The minute points are images of stars. Some of them are accompanied by lines which occur when the images have been allowed to move slowly over the plate, and were of sufficient intensity to produce a trail.

plate taken from the box containing the supply used in the regular work with the telescopes. The plate was then developed in the usual way, the whole experiment having been conducted in the ordinary light of the dark-room. A portion of the result is given in Fig. 3. The spots are seen to be like those in Fig. 2. An-

Fig. 5.

other plate taken from the same box and developed, showed no marks of any sort. Figure 4, shows the result when a plate was brought in contact with the edge, instead of the surface, of an electrified slide. Other experiments produced various effects, including markings similar to those in Figure 5. This figure shows the centre of a plate which was accidently exposed reversed in the holder, i.e. with the film away from the lens, and in contact with the brass spring which holds the plate in position. The points of contact are very apparent.

A remedy was found for the difficulty in moistening the slides with glycerine. A very small amount is sufficient. In fact, after the moistening, the slides may be wiped very thoroughly with a cloth without losing the good effects. However, after a time, it is necessary to repeat the operation. While making the slides, our machinist noticed that the filament in an ordinary incandescent electric lamp was attracted by the hard rubber when slightly electrified. In testing the slides before and after the application of the glycerine, I used such a filament as an electroscope. The effect is greater when the current is turned off, but is not so striking to the eye. The repulsion produced between the two parts of a double filament, such as is found in some lamps, is a very pretty phenomenon.

Hard rubber slides are so generally used that I presume that others have suffered from their electrical properties. At any rate they are factors to be considered, when the weather is dry and cold.

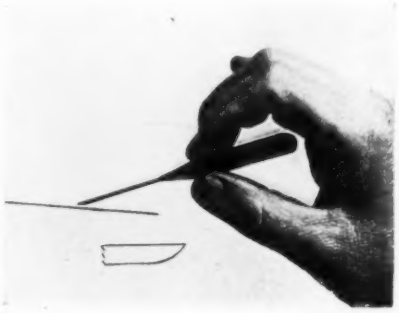
"HER MAJESTY" and the little wild flower that grew at her feet. By M. S. GAINES.

Etching

C. E. HERMAN

of The Guerin College of Photography.

THE secret of good etching lies in the shape of the etching tool and in the preparation of the film. After trying various shapes of etchers, I selected the one shown in the illustration as the best shape for all kinds of work. The blade of the etcher is used in reducing high lights on the face and drapery or any broad mass of light similar. The point is for removing fine lines or small spots such as hair, reflected lights in eyes, etc. To remove very large spots in background or to tone down white drapery, I use a preparation of pumice stone and sweet oil to the consistency of thin paste. One of the principle causes of failure is in not having a tooth for



the etcher. The average dry plate has a very hard surface and in trying to etch on it a great deal of pressure is brought to bear on the tool, with the result that the etcher will cut through the film before you can con-

PRINT, SHOWING LARGE SLEEVES.

trol it. In preparing a tooth for the etcher I use fine pumice stone dry. Proceed to etch as follows: place the negative in the retouching stand and carefully note what you wish to remove, as you locate each spot take a little pumice powder on the end of the finger and gently grind the surface until the glossy appearance of the plate has disappeared, if the blade of the etcher is to be used hold it in the position shown in illustration No. 1, which also shows the shape of the tool. You will notice that it is held between the two fore-fingers and the thumb, and far enough in front so the end of the handle does not touch in the palm of the hand. Keep the etcher at the angle shown, as this gives you a uniform pressure on the plate. Now gently scrape the etcher back and forth on the surface, taking care not to use too much pressure and do not scrape too much in one place. Keep moving it over the entire spot you are reducing. Another important thing, that is, don't be in too big a hurry. Any kind of nice work takes time, instead of removing a spot in two or three strokes take a dozen.

PRINT FROM SAME NEGATIVE, AFTER ETCHING.

Brace the hand firmly on the stand and confine the movement to the fingers only, and aim to scrape on the surface lightly instead of digging in. Don't use any more pressure than you would with the graphite pencil in retouching and if the etcher is sharp and the plate properly ground, you can do the work without having to fill in afterwards with the pencil. In using the oil and pumice powder mixed, dip the point of the finger in it and grind, using a rotative movement on large circular spots and if long and narrow use a chamois stump instead of the finger.

Clean the plate with a tuft of cotton. The photographs accompanying this article show the removal of the large sleeves and the working in of arms. The negative was made when large sleeves were worn and the customer wanting a more modern picture, a negative was made from the original and etched as shown in cut. Placing the negative in the retouching frame, glass side toward me with spotting brush I outlined the arms and sleeves as the line on the print in No. 3 indicates, this serving as a guide. I then ground down the sleeve with pumice, using the stump and being careful not to grind beyond the lines, I had outlined on the back of the plate. The ruffle effect was done with the etcher and retouching pencil. The shade on the arms was ground in with the stump and then blended with the pencil. The etcher can be made as follows: take a piece of wood one inch in diameter and two inches long, and a piece of soft steel one and a half inches long and not over one-eighth of an inch in diameter, file one end of the steel to a sharp point and drive it in the wood about one-half an inch. Then file the steel down to the sharp point shown in the illustration and finish by grinding. Be sure you get a perfect curve to the blade and extend the sharp edge back half an inch from the point. If the steel is too hard to file heat it over a lamp for a few seconds and then immediately plunge it in cold water, this will soften it. Then take a pen knife and dress down the handle.

A GLIMPSE OF THE RIVER. By James E. Taggart.

THE GOLDEN ROD GIRL. By Andrew Emerine, Jr.

The Crucible

FRILLING. During the unprecedentedly hot weather of this summer, frilling would seem to have been the unhappy lot of more photographers than usual, and many have been the inquiries about its causes and prevention. As it seems to have been an entirely new phenomenon to many of our readers, a fact doubtless due to the very uniform good quality of American plates, a few remarks on the subject may not be out of place. The principal difficulty which the subject presents is the absolute surprise of the thing. A plate which has worked normally through the developer and hypo, on being put into the wash water, suddenly begins to swell and pucker up at one corner, and even while one watches, the ruin is accomplished, and the film slides off the plate and expands to the dimensions of a pocket handkerchief. The thing to be done instantly, if no other remedy is at hand, is to put the plate back in the hypo. The frilling is due to the unequal rate of diffusion of water and hypo solution through the gelatine. The water enters the plate much faster than the hypo leaves, and if the liquid can get between the film and the glass, the evil starts, and then continues to gain ground, the film expanding as it leaves its support, thus producing the frill. If the plate is put back into the hypo, the reverse action takes place, and the film usually shrinks to its original proportions but naturally does not resume its hold on the glass. Now a plate in the hypo without any possibility of leaving there is of no particular use, so some other remedy is better than this, if at hand.

One of these is to flood the plate with wood alcohol as soon as the frilling appears. This instantly arrests the swelling and the film soon gets back to its original size. It must then be dried, although still containing hypo. When dry it will have to be washed, and before this can be done, it will have to be tanned. There are two methods of doing this, by alum or by formalin. The alum method is the oldest and most used, but as alum decomposes hypo, we may be sowing the seeds of future decay. The best method then is immersion in a five per cent solution of formalin. After this treatment for five minutes, the film is absolutely inextensible, and may be thoroughly washed without any danger. The washing must be from two to three times as long as usual, because the film has become impervious.

Now let us return to our other plate soaking in the hypo. This may be immediately tanned with either alum or formalin, and then washed without further danger. Formalin may be used on a plate containing hypo without injurious results, at least as far as danger of reducing the silver in the hypo bath is concerned, as may easily be demonstrated by the simple experiment of mixing formalin with an old hypo bath and watching the result. Of course this case demands the greatly increased washing always necessary when a film is tanned.

If the frilling is not detected in time to save the film on its plate, encourage the frilling. Let it proceed until the film is all off; then it may be floated on another glass, and will give a much enlarged negative, or it may be shrunk in wood alcohol to nearly its original dimensions and restored to its original place, being floated on under water. It may not stick well, but this is the best that can be done.

IMOGEN SULPHITE. The developer which has recently been introduced under this name seems to be a very valuable one. The developing medium is chemically combined with sodium sulphite, and the keeping qualities of the substance in a dry state are considerably greater than usual. To prepare the developing solution, it is only necessary to dissolve the substance in twelve parts of warm water. As the alkali solution, one uses a cold saturated solution of ordinary washing soda, and the energy of development of the combination is as great as any other developer yet introduced. It is very worthy of remark that there is complete freedom from fog without any addition of potassium bromide, even in cases when the hydrochinon-potash developer would cause strong fog. For developing papers the use of imogensulphite is highly to be recommended, as it gives beautiful tones, from blue-black to pure black. The new developer is very little affected by the addition of potassium bromide, and considerable quantities of ten per cent solution are required to cause any restraining effect. On this account the developer may be used repeatedly, as long in fact as the red solution does not turn brown in which case it is likely to stain the plates.

London Letter

PERCY LUND

WE are in the midst of our holiday season in England. Hot weather prevails, though the temperature is not so serious as you have experienced in Boston, New York and other parts of the States. However high the thermometer may stand, there is fortunately and almost invariably a slight breeze which keeps the air moving and prevents that lassitude and exhaustion so often experienced in other countries.

Even as I am writing, at a window of my cottage in Westmorland, I can see the sunflowers outside, bending to the breeze, whilst upon my ears falls a faint moaning sound due to the wind sighing through the partly open window.

This is the time of year when the amateur photographer is particularly busy in the field. It is pretty hard work for him, carrying a camera under this blazing sun: that is if he does it thoroughly and takes a good 4 x 5 or 7 1-2 x 5 kit about with him. The light-weight men come off best so far as exertion is concerned, but they do not get many photographs. Snap shots are all very fine in theory, but if we go by results, then the steady going old-fashioned stand-camera is the one which yields twelve good negatives to the dozen. I know this by a long experience. A week ago I returned from the south of England, where in a remote and picturesque valley, I had exposed five dozen plates. With two exceptions all those plates have turned into good negatives; the exceptions being a mishap in drawing the slide with the cap off, and a movement on the part of a little girl who played the part of a "figure in landscape." Such a record could not have been achieved by the hand camera.

One may find every week in the journals hints as to improvising apparatus in the event of breakage or loss. Such trifles as the smashing of a ground glass, the loss of a lens cap, or the bursting of a pneumatic release, are so easily overcome if we may believe some contributors, that the question arises why have these things at all, and so save money in the beginning? When it comes to a tripod top, however, the case is more serious. It would tax the ingenuity of a stage property man to improvise such an appliance at short notice. I remember several years ago, losing my tripod head and going home in disgust without any photographs. Six months later, singularly enough, as I was photographing in the same district, I accidently kicked my foot against the tripod, and once more restored it to the bag. One does not always enjoy such luck.

The event of the past month has been the Photographic Convention at Oxford. I may venture, I think, to give a brief account of the principal events. On Monday, July 8th, the convention opened in the evening with a reception by the Mayor of Oxford and a conversazione, during which the president delivered his annual address. The president, Sir William J. Herschel, Bart., devoted the whole of his address to one subject—Color Photography—and summarised and illustrated the discoveries that have been made in this direction very well indeed. The examples of Ives', Joly's and Sanger Shepherd's processes were capitally shown by the lantern, Miss Acland's work by the last named method in landscape as illustrated by a view of Malvern, and in portraiture by a slide

of a lady in a flower garden — being most interesting and realistic. The first excursion was by steamer on the river Thames, by Iffley, Nuneham and Abingdon to Dorchester. At Iffley there is a fine Norman church, and many pretty views along the banks of the river. Abingdon has two good churches, a row of ancient alms-houses and sundry other old buildings. Dorchester was once an important Roman settlement, but is now a pretty little village whose inhabitants are entirely devoted to agriculture. The excursion of Thursday was to Warwick, whose ancient church and historic castle are highly celebrated. The Conventioners surveyed the interior of the castle, the beautiful park surrounding it, the church which contains the Beauchamp Chapel, and the quaint Leycester Hospital, or almshouses, with its old-fashioned kitchen, courtyard and balconies. Some also drove to Guy's Cliff and Kenilworth Castle, the scenes of Sir Walter Scott's romantic story. On Friday Banbury, Broughton Castle and the old mansion of Compton Wynyates were visited.

One of the nicest events of the whole week was the president's garden party, in the beautiful and well-wooded grounds of Worcester College. This took place on Wednesday afternoon, and in the evening followed the usual dinner. At the annual business meeting it was determined to visit Cambridge in 1902. It is understood that Sir Robert Ball has consented to become president on that occasion.

A practical note or two must bring this letter to a conclusion. First one relating to platinotype. To obtain good prints with blue-black tones on platinum paper from thin soft negatives, the following bath may be used with advantage :—

Water	960 ccm
Neutral potassium oxalate .	135 grms
Potassium phosphate . .	50 "
Sodium sulphate . . .	4 "

The solution is to be used at its normal temperature, and warmed slightly only in the case of under-exposed prints.

And lastly with reference to waterproofing wooden and other dishes. It appears that the coating of either wooden or metallic dishes with a solution of pure asphalt in benzole and subsequent exposure to light renders them immune against the attacks of water, developers, fixing and all other photographic solutions. To prepare the asphalt solution one part of powdered Syrian asphalt should be dissolved in five to six parts of benzole and filtered through a cloth, and the solution thus obtained mixed with three or four times its volume of ether till a precipitate is no longer formed, and then the precipitate collected and well drained and dissolved in from ten to fifteen times its volume of benzole and this painted thinly over the dish and allowed to dry and exposed to sunlight for several days.

Foreign Abstracts

Yellow Stains on Negatives. Negatives which have been intensified without sufficient preliminary washing are often found to have yellow stains on them which seriously injure or even ruin them for printing purposes. A writer in the Photographisches Centralblatt has found by spectroscopic examination of some such stains that, although they are practically impervious to blue rays, they are easily penetrated by orange and red light. Acting on this knowledge, an attempt was made to reproduce the spoiled negatives by making contact transparencies on red-sensitive plates by red light. The exposure was naturally very prolonged, but the experiment proved completely successful, and a positive was obtained from which a perfect negative was made. (Phot. Centrbl., 1901, 272.)

A New Printing Process. E. Weingartner describes a new process which resembles in some ways ozotype and depends for the rest of its essential features on the old aniline process of Willis. Any paper satisfactory for gum-bichromate printing may be used, and the sensitizing is performed as follows: A solution of sodium bichromate, 20 grammes, manganese sulphate, 20 grammes and water 100 c. c., is prepared; when wanted for use, some of this solution is mixed with an equal quantity of 40 per cent gum mucilage. The solution is brushed over the paper uniformly, and the sheets dried in a dark place. The image prints out and the exposure is judged by the eye, no photo meter being necessary. The paper is now developed in cold or tepid water as in gum-bichromate, and an image of manganese chromate in gum remains. The dry print is pinned face up on a board and a solution of aniline hydrochlorate thickened with gum is brushed on. The manganese chromate oxidises the organic compound, and the image soon becomes greenish, and then deep green. When dry this color has changed to blue black and somewhat resembles a platinum print. Thick coating and short exposure give contrast, while flat prints and detail are got by thin coating and long exposure. Instead of aniline hydrochloride the corresponding salt of naphthylamine, of phenylendiamine (metacarbol), or of paramidophenol (rodinal), may be used. The author does not give any formula for the mucilaginous mixture to be used for the final process, but The Amateur Photographer suggests the following: Crystals of aniline hydrochlorate, 10 grammes; gum mucilage, 100 grammes; strong hydrochloric acid, 0.2 to 1 gramme. An undue excess of acid will cause the color to spread to the whites. Commercial aniline hydrochlorate is variable in quality, being sometimes contaminated with excess of aniline and sometimes with hydrochloric acid, so it is desirable to test the acidity of the sample, and add acid accordingly. (Phot. Centrbl., 1901, 267.)

(NOTE. — As Mr. Manly, inventor of the ozotype process, makes the broad claim that his process, patented in the United States as well as Great Britain, covers any addition of a manganous salt to a chromate for photographic purposes, it is interesting to note that Duchochois, in "Photographic Reproduction Processes," published at least as early as 1892, and hence long before Manly's patent, gives two processes in which a manganous salt is used with a chromate. Consequently Mr. Manly's claim is of doubtful validity. Ed.)

Removal of Hypo. Dr. Hauberisser discusses exhaustively the question as to whether it is desirable to use oxidizing agents to destroy hypo in order to shorten the time of washing. Generally, his experiments seem to show that the use of the various substances advo-

vated as "anti-hypos" is never of any advantage, and that in many instances they introduce new risks of deterioration. It is essential to remember that in any case the washing must be sufficient to remove all of the unreduced salts of silver, because even minute traces of silver in the clear parts of the negative will cause ultimate damage. When a negative is completely fixed, the unreduced silver exists as a double thiosulphate of silver and sodium. Ammonium persulphate and other oxidizing substances allowed to act on a washed negative containing either this salt or the simple hypo, decompose them and liberate finely divided sulphur, which is very likely to attack the finely divided silver of the image, and eventually destroy the negative. (Phot. Mitt., 1901 : 181.)

Uranium Toning. It was found that transparencies toned with uranium nitrate and potassium ferricyanide in the usual manner, when exposed to light not of the direct sun in a window, in about four weeks showed fine cracks extending in various directions through the film, and at the end of eight weeks the film was completely destroyed, while the red color had become considerably darker. The author is of the opinion that the disintegration of the film is more probably due to a physical action of the foreign matter in the gelatine film than to any chemical action of the uranium compounds, as he has noticed a similar result in other cases when lead salts were present in the film instead of uranium. (Phot. Mitt., 1901 : 192.)

Formalin in the Developer. Lumiere Brothers having found that the addition of formalin is useful in the hydrochinon developer as a preventative of frilling, a German writer finds that often more than two per cent as recommended by them is desirable, and states that it is also possible to add it to the pyrocatechin developer. Formalin prevents the gelatine from swelling but if much alkali is used, it may not prevent it from coming away from the glass. As, however, the film does not swell in this case, the operations may be continued as usual and after the washing is completed, the film is laid on the glass under water (reversed if for carbon printing) and the whole allowed to dry. (Phot. Centrbl., 1901 : 276.)

New Receipts for Ozotype. For the time being the pigment printing process known as the Ozotype occupies the forefront of public attention; therefore the new recipes given by the inventor himself in his "Lessons in Ozotype" are of present interest. There are several of these which vary according to the character of the negative to be printed:

A For brilliant negatives.

Water	1 Liter
Glacial acetic acid	3 ccm
Hydrochinon	1 g
Copper sulphate	1 g

B For negatives suitable for platinum printing.

Glacial acetic acid	4 ccm

Other substances as in A.

C For very thin negatives.

Glacial acetic acid	5 ccm

Other substances as in A.

These baths may be used repeatedly and will keep about two weeks. Filter use. The temperature of the bath must be about 73° F. for smooth paper, and about 1° F. for rough paper. In these baths, which are called acid baths, the pigment paper is soaked about one minute before its squeegeeing to the chromate picture, which is done in the bath. (Phot. Chronik, 1901 : 346.)

Notes and News

ST. LOUIS, MO. The largest photographic plate ever manufactured is being made by the G. Cramer Dry Plate Co. of this city. It is 8 feet long, 4 feet 8 inches wide and 3-8 of an inch in thickness.

It will be used by a Chicago photographer who will make a photograph from a balloon of St. Paul and Minneapolis, the "Twin Cities." Two of the big plates will be made so that a good one may be insured.

Owing to the dimensions required it was necessary to provide new apparatus. A great marble slab, larger than the plate, was the first requisite. Upon this the plate is resting while the coating is being applied.

Large pieces of ice beneath the slab keep it at a temperature that will cool the emulsion rapidly as it is applied. The remainder of the process of manufacture is identical with that to which smaller plates are subjected.

The plan for the photographic exhibit at the World's Fair are rapidly taking shape. In former expositions the photographic displays have been placed in some obscure part of the buildings, along with displays of materials, such as plates, tripods, paintod backgrounds, and patent pastes. The idea at St. Louis is to have the photographic display in a pavilion connected with the art building, entirely separate from all trade connections, and to include only pictures which are worthy the name of art. The selection will be the work of a jury of photographers and artists all of whom shall be of national fame. A large but separate room will contain a historical exhibit showing the progress of photography from the time of Daguerre to the present day.

CHICAGO, ILL. A plan for recording checks with a photographic apparatus controlled by electricity has been successfully put into operation here, in the national bank of the Republic. The machine will take pictures of 10,000 checks in an hour.

A roll of film 120 feet long is placed in the receiving box and the checks are put automatically into transparent holders. The pictures can be rolled on reels and stored. It is claimed for the instrument that it will perform what it would take nine clerks to do, and there is no opportunity for mistake.

PORTRAIT PHOTOGRAPHY. The June and July numbers of the "Internationale Musterblatter von Portrait-Aufnahmen" contain, as usual, a number of American examples, and are admirable as helps to photographers who desire to see what is best in portrait photography from all parts of the world.

No. 31 of the "Deutsche Photographen-Zeitung" has an admirable portrait by Falk as its chief artistic feature. This is printed on "Rotograph" paper.

MANILA, P. I. Few photographers in the states realize to what an extent photography has been useful in the work of the United States in pacifying the Phillippines. A very complete photographic department has been organized, and its members have performed some really heroic feats. Captain O'Keefe performed before Malabon one of the most brilliant pieces of photography ever attempted. He was engaged in taking a picture of the enemy's entrenchments some hundred yards without his own lines, when a band of Filipinos led by a deserter attempted to cut him off. He calmly focused his camera on the proper spot, waited until the band broke from cover not fifty yards from him, and then photographed them. During his subsequent retreat his assistant was twice wounded, he himself once, his spare plates were shattered, but the camera was uninjured, and the plate he took was subsequently the means of convicting the deserter of treason, for which he is now serving a life sentence.

During operations in China, the American photographers were everywhere in the front of operations, and secured a most complete and valuable record for future historians.

CONTROL OF PHOTOGRAPHS. A decision which is likely to be of interest to all photographers was recently rendered in a New York court, affirming the opinion of Justice Davy that an action in damages lies against one who uses for advertising purposes the picture of a person without his or her consent.

The court went even further. Not only did a woman have the right to say what should be done with her own photograph, but an attempt to take a picture of her for sale to a painter or publisher would be a violation of her right of property and restrainable by legal process. This opinion, if upheld, by the court of appeals, will have the effect of making the work of the kodak fiend of doubtful utility to publishers of magazines and pictorial newspapers. It should be law if law is common sense. While

the light, which is the chief agent in producing a negative, is free to all and the camera with which the picture is taken may not be the property of the subject of the picture, the latter may reasonably object to reproduction in a way to cause notoriety or annoyance.

A NEW LENS. Dr. E. F. Grun has perfected and is shortly to place on the market a lens which far surpasses in rapidity any yet made. By the use of a fluid of the same refractive index as the glass, placed between the lenses, a much greater illumination is secured, and the combination will work at an aperture of f-0.25, or four times as great as the best cinematograph lenses. With opening f. 1 the light of one Welsbach burner gives sufficient illumination to enable a portrait to be taken in one second, and the inventor has photographed a play from the stalls with 1-4 second exposure, getting a very good picture.

NEGATIVE ALBUM. One of the neatest combinations that we have seen for preserving negatives or unmounted prints is the Globe Photo Negative Album a handsome book recently placed upon the market by the Globe Wernicke Co.

It has fifty numbered envelopes of strong bond paper, enclosed in a handsome cloth cover with Russia leather back and corners and patent clasp fastening.

Each envelope has two compartments for films or unmounted prints and has printed form for information desired concerning the negatives or prints contained.

The envelopes are removable and can be changed or increased at will.

Outside dimensions 11 x 7 1-4 x 3 1-8 inches. We can mail them postpaid to any address in the United States for $2.50.

DETROIT, MICH. The "Angelo" Platinum Paper display was not one of the least attractions at the National convention. A fine set of portraits by the best photographers of the country showed the quality of the paper, which was fully explained by Mr. Di Nunzio personally to the throng of friends who congratulated him upon the success of his new enterprise.

A SUBSCRIBER ENQUIRES. In using single lens (of a double combination focus 8 in.) in a long focus bellows, what is the factor for determining correct exposure, the proper exposure for R. R. combination being known? "We assume that the purpose of this enquiry is to reckon distances from lens in making enlargements. If this be so, then there is an easy way of getting at the result by a mere mental calculation. Multiply the focal length of the lens by the number of times of enlargement plus one. This will give the necessary distance for projection. Then divide this result by the number of times of enlargement. The quotient will give the corresponding distance of the negative from the lens. For example, suppose it is desired to enlarge a negative four times, using a six-inch lens. Then 6 times 5 equals 30, divided by 4 equal 7 1-2; that is, the negative must be 7 1-2 inches from the lens and the image be projected 30 inches. Where it is desired to reduce instead of enlarging, the relative positions are simply reversed.

PHILADELPHIA, PA. The Philadelphia Academy of the Fine Arts and the Photographic Society will open an exhibition of photographs on November 18, for which unusual preparations are making. The standard maintained by this latter society has been high.

This year a number of foreign photographers of the first rank have promised their co-operation. The jury of selection consists of Charles I. Berg of New York, Miss Frances B. Johnston, of Washington, Allen D. Cook, George W. Hewitt and Herbert M. Howe, M. D., of Philadelphia.

BOSTON, MASS. The fifth annual Convention of the Photographers Association took place in Copley Hall, Boston, Aug. 28th–30th. A full account of the proceedings will be given in the next issue of the PHOTO ERA.

WATERTOWN, N. Y. Says the Watertown Herald. There is living in Watertown, N. Y., one Daniel Minthorn who antedates Hawes in "shadow catching," two or three years. In 1838 he constructed a camera out of a candle box and borrowed a lens of a local jeweler; manufactured his own chemicals and polished his plates at a saddlery store. His friends thought he was out of his head and the local Methodist minister tried to persuade him to drop the work, or he certainly would lose trade. But Minthorn persevered, went down to New York and perfected himself in the art of making Daguerrotypes with Prof. Morse, and started traveling, making a business of "catching shadows." One of his first pictures was that of a young man named George B. McClellan, who afterwards became a noted general. But prejudice was strong, the superstition of the people great, and Mr. Minthorn embarked in other business.

The Past and Present

Death of Josiah Johnson Hawes of Boston
The Oldest Professional Photographer in America.

JOSIAH Johnson Hawes, the oldest professional photographer in the world, died at Crawford, N. H., on Wednesday Aug. 7th. whither he had gone for rest. Though in the 94th year of his age, he did his own operating and posing, until the last. His venerable figure and quaint studio in Tremont Row, Boston, has been a striking landmark in the city for over sixty years. He was a painter of portraits in oils in his early days. In 1841, only two years after Daguerre had communicated his discovery to the Academy of Science in Paris, and in the same year that Fox Talbot first gave the Royal Society in London a description of his process for securing a negative, Mr. Hawes was making daguerrotypes in Boston. Two years later Dr. Draper of New York succeeded in reducing the time of exposure necessary from thirty minutes to 25 seconds. The process being now feasible Mr. Hawes associated with him a partner, Albert Southworth, and together they built the first skylight for sun pictures in America, and soon the studio of Hawes & Southworth, Daguerrotypists, was known all over the East for fine portrait work.

Among those who sat before Mr. Hawes' camera were Daniel Webster, Charles Sumner, Rufus Choate, Louis Kossuth, Theodore Parker, Emerson, Channing, Jared Sparks, Bronson Alcott, Lyman Beecher, Thomas Starr King, Dorothea Dix, Lucy Larcom, Oliver Wendell Holmes, Longfellow and many more whose fame still lives. Jenny Lind and her lover, Otto Goldschmidt, were taken while seated hand in hand.

Charles Dickens was a frequent visitor, when he came to Boston, and with James T. Fields as his companion, he often used to climb the winding stairs to the studio or "salon," as it was called in these early days.

The Boston Herald tells how the original daguerreotype of Webster was made on the morning when he, Webster, delivered his famous Anthony Burns speech from the balcony of the Revere House. The old photographer had also at least a dozen other daguerreotypes of Webster, made at different periods of his career.

In those days sitting for one's picture was, with most people, a serious business, not to be entered into lightly. There was no duplicating a daguerreotype except by a second sitting. There was no ordering a dozen or two, to be reproduced from one negative, The favorite size, which, though larger, corresponded to the cabinets of to-day cost $15 apiece. They were made on copper plates, faced with silver and polished like a mirror and were inclosed in a case or frame under glass.

In late years Mr. Hawes revived the art of daguerreotyping with marked success. He had little sympathy with the modern notion of retouching negatives and with modern photo papers, but stuck to Albuma, and Daguerre's process found an unusually fine student in him. He was the inventor of numerous mechanical devices, such as the swing-back camera, the reflecting stereoscope, the multiplying camera and the curtain plate holder, a clamp for polishing, the vignette, etc.

Josiah Johnson Hawes lived to see photography developed into a popular science, first; then, into a world embracing industry, and finally he saw it lifted up to a coveted place among the Fine Arts. He lived to see photography placed within reach of the humblest man, woman and child, through the ubiquitous Kodak, the Brownie, and other cheap cameras. He lived to see a complete map of the stars of heaven made by photography. He saw the cinematograph and its moving pictures. He lived to see pictures taken by telegraph and wafted through space. In fine, he saw the birth and development of the science, for sixty years, and was part of it, an experience that seldom falls to the lot of man.

He had fine taste in art and literature and with his poetic temperament was combined a keen mind, great energy and strong will. His intellectual power diminished only slightly with advancing age. In later years his appearance strongly suggested the poet Bryant. He died as he had lived a man of scrupulous integrity, a staunch friend and loyal to his profession to the end.

The PHOTO ERA is glad to pay this tribute to his worth here, because of the distinguished services he gave to the art of photography.

The generation of great men and women who knew him, profited by his knowledge and marvelled at his art beautiful, are passed and gone. He was the last link in the long chain connecting the past and present of photography. But his memory will live in the hearts of those who delight to make pictures and who honor the profession of which he was such an distinguished member.

PHOTO ERA

The American Journal of Photography

Published and copyrighted by the proprietor,
THE PHOTO ERA PUBLISHING COMPANY,
170 Summer Street, Boston, Mass.

THOS. HARRISON CUMMINGS, Editor.

Associate Editors:

M. O. SAMPSON, F. R. FRAPRIE.

Entered at Post-Office, Boston, as second-class matter.

Contributions relating to photography in any and all of its branches will be received for publication.

SUBSCRIPTION RATES.

The annual subscription in the United States, Canada, and Mexico, is $1.50
In other Countries within the Postal Union . 2.00

Always payable in advance.
Single copies 15 cents each.

Advertising rates on application to the manager.

VOL. VII. SEPTEMBER, 1901. No. 3

A SONG OF AUTUMN.

Ho for the bending sheaves
Ho for the crimson leaves
Flaming in splendor!
Season of ripened gold,
Plenty in crib and fold,
Skies with depths untold
Liquid and tender.

Far, like the smile of God,
See how the golden-rod
Ripples and tosses!
Yonder, a crimson vine
Trails from a beaıder pine
Thin, as a thread of wine,
Staining the mosses.

Autumn is here again
Banners on hill and plain
Blazing and flying.
Hail to the Amber morn
Hail to the hunter's horn
Swelling and dying. — *Buckham.*

September. The coming of September, the turning point of the season, is something to be eagerly watched for each year and its beauty remembered. The pen pictures of the poet can be duplicated by the photographer many times over during this month. The variety and richness of the scene is practically unlimited. There is beauty everywhere, as if nature were under a spell of enchantment, and the foliage of the trees is at its highest development of brilliancy and color. Few thoughtful persons can come into close contact with the forests and pastures at this time, when the leaves and grasses are changing, who do not even take a new direction in their thoughts and feelings and who are not quickened in their spiritual life by what they see. There is a something in the very atmosphere that reaches out to the mind and heart and even those who cannot express themselves are aware of sensations that are inspiring and helpful. It is the message of immortality to the soul. The tree does not die when its leaves fall, but begins to prepare itself for another year's work.

In Longfellow's prelude to his "Michael Angelo," we read: "Nothing that is, shall perish utterly, but perish to revive, again in other forms, as clouds return to earth the gentle exhalations of the land and sea. So we know,

That Autumn surely leads to spring,
And leaflets rise from dust —
Spring, summer, autumn or winter.

Photography in the Schools. Just a year ago we wrote editorially, as follows, "The PHOTO ERA will continue to advocate, as it has always done, in the past, the development of photography, along educational lines. We will welcome to our pages any intelligent and thoughtful contribution, on this subject, from our readers. And we will continue to agitate the subject until it sinks deep into the minds of our readers and arrests the attention of educational workers."

During the past year, we have been in correspondence with over one hundred colleges and universities throughout the country to ascertain how far the study of photography entered into their curriculum, and the results of this enquiry have appeared from time to time, in the pages of the PHOTO ERA.

In the present issue, we publish, on page 94, for the first time, a copywrighted suggestion for an Element-

ary Course in "School" Photography. It is the first of a series which we hope to be able to issue from time to time, under the title of PHOTO ERA Art Classes. Our aim is primarily to urge upon the attention of teachers in the secondary grade schools the necessity of using photography as an advanced educational help or appliance for teaching. As an aid to the teaching of geography, local history, nature study, civics, or as a help to English composition it is of priceless value. As an aid to instruction in drawing, it is without a peer.

It trains the eye to line and perspective, cultivates the faculty of observation in a child, and teaches him to see the beautiful in the common things about him.

Photography as applied to modern education is in many ways useful and very desirable. — David S. Jordan, Pres. Stanford University, Cal.

Photography and Journalism. We are privileged to reproduce, in this issue, three articles from the pens of three rising young journalists who employ the camera and photography, with singular success, to help out their journalistic work. Julian Burroughs who writes on the Athelete, Camera and Newspaper, is a Harvard man who has made quite a reputation for himself, during his under graduate days, in illustrating Athletics for the metropolitan dailies. He is a son of John Burroughs the famous naturalist.

Ernest Harold Baynes is a young naturalist of rising fame in the scientific world who is already favorably known through his contributions to the leading periodicals of the country.

Edward S. King who writes on the Electrical Action of Slides is a valuable assistant to Professor Pickering at the Harvard Observatory. In all three fields, Athletics, Ornithology and Astronomy these writers illustrate exclusively by photographs from nature. And we call special attention to their work here, because they exemplify the relationship between photography and journalism. Within the last decade, photography has rushed to the front as a graphic recorder of events, and seems destined in the near future to play a still more important part in journalism.

The pace at which we live, says the British Journal, dictates the necessity for accuracy and brevity of expression. But, although photography may be inferior to the art of the draughtsman for the vigorous representation of fact, by means of a few lines, the men who are able to give us these representations are so few compared with those who can use the camera, that the advantage must lie with the latter, when we bear in mind the accuracy and speed of photography. Pictures illustrating important events should be truthful if they are to be of any value. We want to see what has actually happened and not a fanciful drawing such as we too often meet with in our illustrated papers.

Editors of the pictorial press are alive to the fact, and if photographers would more generally cultivate the art of rapid work, and insist upon good remuneration for it, they might frequently make welcome additions to their income."

I believe that photography is a valuable addition to Modern Education. — A. B. Stevens, University of Michigan, Ann Arbor, Mich.

National Convention. The twenty-first annual convention of the Photographers of America closed a four days session at Detroit, Mich., Aug. 9th. — one of the most successful in its history. The addresses, some of which we have reproduced for our readers in full and the pictures exhibited, were up to the usual high water mark of this body.

No story of this convention would be complete without an allusion to the social side of the convention which was well cared for by the General Aristo Co. Between boat rides, music, entertainments, etc., they fairly outdid themselves, in their efforts to make everybody feel happy. In fact, to feel happy was the key note to the entire convention, and it will go down in history as the "Happy Convention." Among the exhibits, that of the Lens and Brush Club of Boston which was in a room by itself, aroused considerable interest. The pictures numbered 120 in all and included portrait studies, genre work, marines and landscapes, Such names as Armstrong, Hearn, Parkinson, Garo, Pierce, Partridge, Kimball, Latimer and others, well known in the photographic world appear in the catalogue and are a guarantee of work of a high order of merit.

One of the largest and most conspicuous exhibits in the Hall was made by Ralph J. Golsen of Chicago, the well known photo supply dealer. The handsome prints shown by Mr. B. Russegger, the selling agent of Rotograph Paper attracted much favorable comment, as did the genial personality of the gentleman himself. The Bromide Monthly edited by Mr. Abel formerly of the PHOTO ERA staff, was distributed by this house, and carried a handsome portrait of Pres. Core, as a frontispiece. There have been other conventions but none so happy as the Detroit Convention of 1901.

I do not see why photography might not be introduced with advantage among practical studies. — W. P. Aylesworth, Pres. Cotner University, Bethany, Neb.

Enfant Terrible. Our genial contemporary Camera Craft, cannot resist its very youthful inclination to have some fun with somebody. So, it again essays the role of ***Enfant Terrible*** in the photographic world.

After losing at Detroit by a big margin, the National Convention for 1902, in spite of the eloquent appeal made by its managing editor, one would suppose that it would be glad to remain quiet for a while, at least. Not so, however. It bobs up serenely in its August issue, and, by a clever device, calls attention to the recent break of our esteemed contemporary Photo Miniature, anent the PHOTO ERA.

Instead of pouring oil on the troubled waters, like a good Christian, Camera Craft adds fuel to the flames like an ***Enfant Terrible,*** hoping thereby to widen the breach, presumably. But we beg to assure our youthful contemporary, that, in diplomatic parlance, the ***"Entente Cordiale"*** between PHOTO ERA and Photo Miniature has never been seriously threatened. We admire Photo Miniature and we enjoy Camera Graft, but our exuberant young contemporary from the Pacific slope must surely know that youth and inexperience is no excuse for lack of dignity.

That the teaching of the fundamental principles of photography in school with some practical illustrations, once a week can be made a joyful pastime to the little student, and that such instruction is as useful as drawing lessons and music. — Johannes Meyer, Md. In Camera and Dark Room.

N. E. Convenrion. We desire to call attention to the very commendable public spirit shown by Messrs. Sprague and Hathaway the well known manufacturers of West Somerville, Mass., in sending out, at their own expense, a special call to the N. E. Convention of 1901. Mr. Woodward, Treasurer of the concern, is chairman of the entertainment committee and the success of the social side of convention was largely due to his efforts.